

PX 2

Exhibits A-I

Exhibit A

From: John Hyman (hyman@telegram.org)
Sent: Tuesday, January 16, 2018 10:40:22 AM
To: Pavel Durov (ceo@telegram.org)
Cc: [REDACTED]; John Hyman (hyman@telegram.org)
Bcc:
Subject: Re: [REDACTED] investment in Telegram ICO, [REDACTED]
Silicon Valley

Hi [REDACTED]

Thank you for your interest -is there a good time today to catch up and discuss this in more detail
Regards John

John

On 16 Jan 2018, at 10:27, Pavel Durov <ceo@telegram.org> wrote:

[REDACTED], thank you for your interest in TON.

I am cc'ing John, Chief Investment Adviser at Telegram. He'll be happy to provide more details.

On Tue, Jan 16, 2018 at 06:27 [REDACTED] > wrote:

Hi Pavel,

Heard you just expanded the round. We are shareholder and coin holders in five (QTUM, VEN, ELF, ...) of top ten blockchain companies in China, and believe we can be strategic in your expansion into the global exchange business.

Also, we are investing into sovereign relationships that will give permanent legal frame work to blockchain companies to operate globally. I can tell you more about it. Land based government will have some competition.

We don't need a lot of allocation, just a \$20M symbolic investment so we have some stake in the transformation.

Look forward to hearing from you.

From: [REDACTED]
Sent: Saturday, January 13, 2018 8:17 PM
To: Pavel Durov <ceo@telegram.org>
Subject: Re: [REDACTED] investment in Telegram ICO, [REDACTED] in Silicon Valley

Thanks Pavel, how big is the first round and is there a second round coming up? Terms? Thanks
[REDACTED]

Sent from my iPhone

On Jan 13, 2018, at 4:00 PM, Pavel Durov <ceo@telegram.org> wrote:

[REDACTED]

It's good to connect. We'd love to have you, but the first round is already closed due to a heavy oversubscription.

Thank you for the invitation to the conference. Unfortunately, I'll have to pass as I'm already committed to be in Davos on this date.

Best,

Pavel

On Sat, Jan 13, 2018 at 11:42 PM, [REDACTED] wrote:

Dear Pavel and Nikolai,

First of all, I am a user and fan of your platform since mid last year.
[REDACTED] Product kicks ass.

My partner [REDACTED] and I are interested in investing in your ICO. As you know, [REDACTED] has [REDACTED], and we are the most active investor in the crypto space. Our portfolios include Coinbase, Ledger, Tezos, Bancor, VeChain, Aragon, to name a few. And we incubated [REDACTED] largest chain in China.

Can we set up a quick call?

Finally, [REDACTED] in San

Francisco. It would be my pleasure to have you keynote. Both [REDACTED]

[REDACTED] Litecoin, Ripple, QTUM, NEO,

VEN, Monero. Plus managing partners from traditional venture funds –

[REDACTED] just to name a few. AS you know, [REDACTED]

been investing in Silicon Valley for a long time, so the conference will have all of our main stream investors, who I think should have strong interests in Telegram.

Talk soon,

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Exhibit B

From: John Hyman [<mailto:hyman@telegram.org>]
Sent: Tuesday, January 16, 2018 9:32 PM
To: [REDACTED]
Subject: Telegram Update

Dear [REDACTED]

It was good speaking to you today -please find attached a letter we sent to all prospective investors yesterday with an update on the transaction .

Could you please fill out the attachment and we will see what we can do re allocation

We would like to update you on where things stand with the Telegram Open Network (TON) private placement and where the process will go from here.

We are humbled by the great reception you and other investors have given to TON and the offering. At the close of our process to gather expressions of interest, we have received expressions of interest for over US\$3.75 billion of Grams from approximately one hundred investors. Of equal relevance is the broad and balanced distribution of investor interest. We are on track to achieve an equally distributed holder base between Asia, Europe and the United States.

The combination of the scale and quality of the demand has led us to rethink our strategy for both this transaction and the next round.

We have decided to increase the volume of this round to US\$850 million, distributing 45% of the total supply. Based on the formula in the White Paper, this results in a price of US\$0.37756101 per Gram. We selected this offering size not only to give us sufficient capital to develop TON and the associated functionality within Telegram Messenger over the next number of years, but also to facilitate an allocation process that will ensure that every investor that participated in it and is eligible to receive an allocation will receive one. Throughout the process we have emphasized the importance of Grams being widely distributed, which we believe will allow Grams to function as a decentralized currency.

In terms of the next round, we expect that it will start in mid-March 2018, and we expect that it will be sized at US\$1.15 billion. In this round, Grams will be offered on a private placement basis in exchange for fiat currency. All

investors in this round will purchase at the same price relative to one another (using the average price per Gram sold in the round, as per the formula in the White Paper). As an illustration, if the round is US\$1.15 billion, the price to investors will be approximately US\$1.45 per Gram. Grams issued through this round will not be subject to any lock-up provisions.

Below you will find a document that confirms your indication of interest based on these revised terms. We would like this returned by close of business in your region on January 17th.

Thereafter the anticipated process is as follows:

- * Wednesday 17 January (COB) ◆ Deadline for you and other investors to submit their signed indication of interest (attached below).
- * Thursday 18 January<x-apple-data-detectors://8> ◆ Indicative allocations and purchase agreement sent to investors along with a process letter.
- * Thursday 25 January<x-apple-data-detectors://9> ◆ Deadline for investor acceptance and signature to purchase agreement.
- * By Friday 9 February<x-apple-data-detectors://10> ◆ Payment and closing of all purchases.

Thank you for your interest in TON and the offering.

Kind regards,

John Hyman

<Telegram - Indication_of_Interest.pdf>

<Telegram Whitepaper .pdf>



Telegram

PRIMER

Table of Contents

Introduction	3
Problem Statement	3
Outline of the Vision	4
A Brief History of Telegram	5
Telegram Open Network (TON)	7
TON Blockchain	7
Infinite Sharding Paradigm	7
Instant Hypercube Routing	8
Proof-of-Stake Approach	8
2-D Distributed Ledgers	8
TON Platform	8
TON Storage	8
TON Proxy	9
TON Services	9
TON DNS	9
TON Payments	9
Telegram Messenger-TON Integration	10
Light Wallet	10
External Secure IDs	11
Ecosystem	12
Bot Platform	12
Groups and Channels	12
Digital Content and Physical Goods	12
A Gateway to Decentralized Services	13
Uses of TON as a Cryptocurrency	13
Roadmap	14
Token Distribution	15
Use of Funds	17
Governance	18
Team	19
Founders	19
Other Notable Team Members	20



Introduction

Cryptocurrencies and other blockchain-based technologies have the potential to make the world more secure and self-governed. However, to this day, no consensus-backed currency has been able to appeal to the mass market and reach mainstream adoption.

This paper outlines a vision for a new cryptocurrency and an ecosystem capable of meeting the needs of hundreds of millions of consumers, including 200 million Telegram users.



Launching in 2018, this cryptocurrency will be based on multi-blockchain Proof-of-Stake system — TON (*Telegram Open Network, after 2021 The Open Network*) — designed to host a new generation of cryptocurrencies and decentralized applications.

The protocol and other components of TON are described in detail in the Technical White Paper, while this document focuses on a general overview of the proposed technology and its uses.

Problem Statement

Bitcoin has established itself as the «digital gold», and Ethereum has proved to be an efficient platform for token crowd sales. However, there is no current standard cryptocurrency used for the regular exchange of value in the daily lives of ordinary people. The blockchain ecosystem needs a decentralized counterpart to everyday money — a truly mass-market cryptocurrency.



Despite their revolutionary potential, existing cryptocurrencies lack the qualities required to attract the mass consumer. There are three main hurdles in today's environments:



The established blockchain networks — Bitcoin and Ethereum — play important roles in the ecosystem, but don't have the capacity to replace VISA or Mastercard. In their current architecture they are limited to a maximum of **only 7 transactions per second for Bitcoin and 15 transactions per second for Ethereum**, resulting in insufficient speeds and higher transaction costs.



Regular users starting to engage with Bitcoin and similar technologies **often get confused** when trying to buy, store, and send their coins.



The market of goods and services that can be bought with cryptocurrencies is limited, and the **demand** for crypto-assets **comes mainly from investors, not consumers**.

The current state of blockchain technology resembles automobile design in 1870: it is promising and praised by enthusiasts, but inefficient and too complicated to appeal to the mass consumer. As a result, no cryptocurrency or decentralized platform has gone truly mainstream, and centralized solutions continue to dominate the market.

Outline of the Vision

Exchanging value should be as easy as exchanging information, and blockchain technology offers the ideal foundation to make this a reality. To reach mainstream adoption, a cryptocurrency — and its underlying blockchain design and ecosystem — requires:



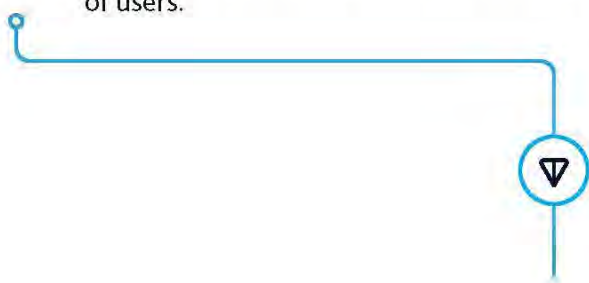
Speed and scalability that allows for processing millions of transactions per second and accommodating hundreds of millions of active users and millions of applications.



Intuitive user interfaces that enable an average user to easily buy, store, and transfer value, as well as use decentralized apps in a natural way.



An engaged user base that serves as the pre-existing critical mass necessary for the ecosystem to grow and eventually become adopted by hundreds of millions of users.



Telegram is uniquely positioned to establish the first mass-market cryptocurrency by providing a platform that combines these properties.

Telegram will use its expertise in encrypted distributed data storage to create TON, **a fast and inherently scalable** multi-blockchain architecture. TON can be regarded as a decentralized supercomputer and value transfer system. By combining minimum transaction time with maximum security, TON can become a VISA/Mastercard alternative for the new decentralized economy.

The Telegram Team will rely on its 10-year experience in building **user-friendly interfaces** for tens of millions to create light wallets, exchanges, and identification services that will allow users to get on board with cryptocurrencies in an intuitive way.

Integrated into Telegram applications, the TON wallet will become the world's most adopted cryptocurrency wallet.

Telegram will leverage its **existing ecosystem** of communities, developers, publishers, payment providers, and merchants to drive demand and value for TON cryptocurrency. A whole new economy saturated with goods and services sold for cryptocurrency will be born — similar to WeChat's fiat-based marketplace, but not confined to a centralized service.

A Brief History of Telegram

Telegram was founded in 2013 by libertarians to preserve freedom through encryption. The project has declared not-for-profit goals and remains independent and self-funded. Like Wikipedia, which for years has been a role model for the Telegram founders¹, Telegram has chosen a .org domain to emphasize its non-commercial status.

The physical infrastructure of Telegram reflects its founders' belief in larger decentralization. Telegram deploys a distributed server infrastructure to synchronize encrypted data across multiple independent server clusters spread across different continents and jurisdictions.

The resulting combination of speed, encryption, and independence attracted millions of users within a few months after the project's launch² in 2013. Telegram kept evolving with an average of 12 major updates a year. By February 2016, it had 100 million monthly active users and was delivering 15 billion messages daily.

1. Founder of Facebook for Russia donates \$1M to Wikipedia at DLD.

2. [Why Telegram has become the hottest messaging app in the world.](#)



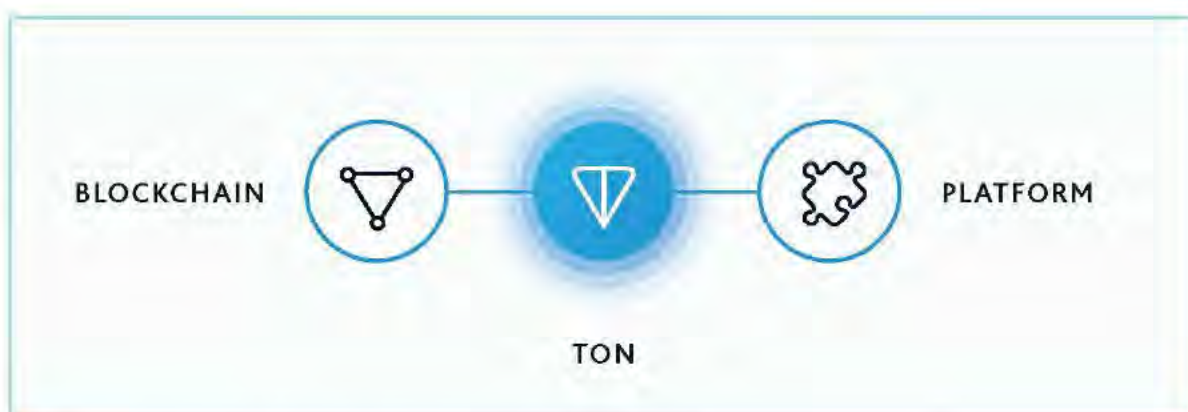
In October 2017, Telegram reached 170 million monthly users, delivering 70 billion messages every day.³ At least 500 000 new users join Telegram daily. At this rate, the service is expected to hit **200 million monthly users in Q1 2018**. These users can provide the required critical mass to push cryptocurrencies towards widespread adoption. 

3. Push notifications delivered on iOS and Android devices daily.



Telegram Open Network (TON)

Because taking cryptocurrencies mainstream in 2018 would not be possible using the existing blockchain platforms,⁴ Telegram co-founder Dr. Nikolai Durov set out to find a novel solution to meet the speed and scalability required for mass adoption. His research resulted in the design for the Telegram Open Network — a fast and secure blockchain and network project.



TON Blockchain

At the core of the platform is the TON Blockchain — a scalable and flexible blockchain architecture⁵ that consists of a master chain and up to 2^{92} accompanying blockchains. Below are some notable design choices that allow the TON Blockchain to process millions of transactions per second.

Infinite Sharding Paradigm

To achieve scalability, TON has built-in support for sharding: TON blockchains can automatically split and merge to accommodate changes in load. This means that new blocks are always generated quickly and the absence of long queues helps keep transaction costs low, even if some of the services using the platform become massively popular.

See «Infinite Sharding Paradigm», 2.1.2.

4. See sections 2.8 and 2.9 in the Technical White Paper for a comparison of blockchain projects.

5. See section 2 in the Technical White Paper.





Instant Hypercube Routing

TON blockchains use smart routing mechanisms to ensure that transactions between any two blockchains will always be processed swiftly, regardless of the size of the system. The time needed to pass information between TON blockchains grows logarithmically with their number, so scaling to even millions of chains will allow them all to communicate at top speed.

See «Hypercube Routing» and «Instant Hypercube Routing», 2.1.4, 2.4.19, 2.4.20.



Proof-of-Stake Approach

TON uses a Proof-of-Stake approach in which processing nodes («validators») deposit stakes to guarantee their dependability and reach consensus through a variant of the Byzantine Fault Tolerant protocol. This allows TON to focus the computing power of its nodes on handling transactions and smart contracts, further increasing speed and efficiency.

See «Proof-Of-Stake Approach», 2.1.16, 2.6.



2-D Distributed Ledgers

TON can «grow» new valid blocks on top of any blocks that were proven to be incorrect to avoid unnecessary forks. This self-healing mechanism saves resources and guarantees that valid transactions will not be discarded due to unrelated errors.

See «Account chains», 2.1.1, 2.1.17.





TON Platform

As a multi-blockchain project, TON requires sophisticated network protocols — such as the TON P2P Network used to access the TON blockchains⁶ — that can be reused to give a significant boost in flexibility to the platform. The following components are scheduled to be released after the TON Blockchain core and will further increase the potential uses of the TON infrastructure.



TON Storage

TON Storage is a distributed file-storage technology, accessible through the TON P2P Network and available for storing arbitrary files, with torrent-like access technology and smart contracts used to enforce availability. This component not only enables storage services akin to a distributed Dropbox, but also paves the way for more complex decentralized apps that require storing large amounts of data, such as Youtube — or Telegram.

See «TON Storage», 4.1.8 and «Is it possible to upload Facebook into blockchain?» 2.9.13.



TON Proxy

TON Proxy is a network proxy/anonymizer layer used to hide the identity and IP addresses of TON nodes. Similar to I²P (Invisible Internet Project), this layer can be used to create decentralized VPN services and blockchain-based TOR alternatives to achieve anonymity and protect online privacy. In conjunction with the TON P2P Network and TON DNS, TON Proxy can make any service, including Telegram, effectively immune to censorship.

See «TON Proxy», 3.1.6, 4.1.6.

6. See «TON Networking», Section 3 of the technical whitepaper.





TON Services

TON Services provides a platform for third-party services of any kind that enables smartphone-like friendly interfaces for decentralized apps and smart contracts, as well as a World Wide Web-like decentralized browsing experience.

See «TON Services and Applications», 4.



TON DNS

TON DNS is a service for assigning human-readable names to accounts, smart contracts, services, and network nodes. With TON DNS, accessing decentralized services can be similar to viewing a website on the World Wide Web.


See «TON DNS», 4.3.1, 4.3.2, 4.3.3.



TON Payments

TON Payments is a platform for micropayments and a micropayment channel network. It can be used for instant off-chain value transfers between users, bots, and other services. Safeguards built into the system ensure that these transfers are as secure as on-chain transactions.

See «TON Payments», Lightning-style off-chain transactions, 5.

All these services can be integrated with third-party messaging and social networking applications, uniting the centralized and the decentralized worlds. 



Telegram Messenger-TON Integration

Telegram-TON integration will provide a clear path to cryptocurrencies for millions of people. Telegram Messenger will not only serve as an example of the possibilities offered by integrating with TON, but will also add unique features to the TON platform, leveraging Telegram's massive user base and developed ecosystem.

Light Wallet

The TON architecture supports light clients that can run on mobile devices without consuming significant resources. TON light wallets will be built into Telegram applications, allowing millions of users to store their funds securely in the TON blockchain. The wallet owners will be the sole holders of the corresponding encryption keys.

See «Merkle proofs», 2.3.11; «Light wallet and TON entity explorer..», 4.3.19.

Telegram mobile and desktop applications with integrated wallets will also double as TON clients, enabling secure transfers of value within the TON blockchain and interaction with TON smart contracts and applications. Telegram will offer streamlined interfaces for sending value to contacts and paying for purchases in TON.

See «TON DNS use cases», 4.3.2; «Light wallet and TON entity explorer..», 4.3.19; TON Payments, 5.

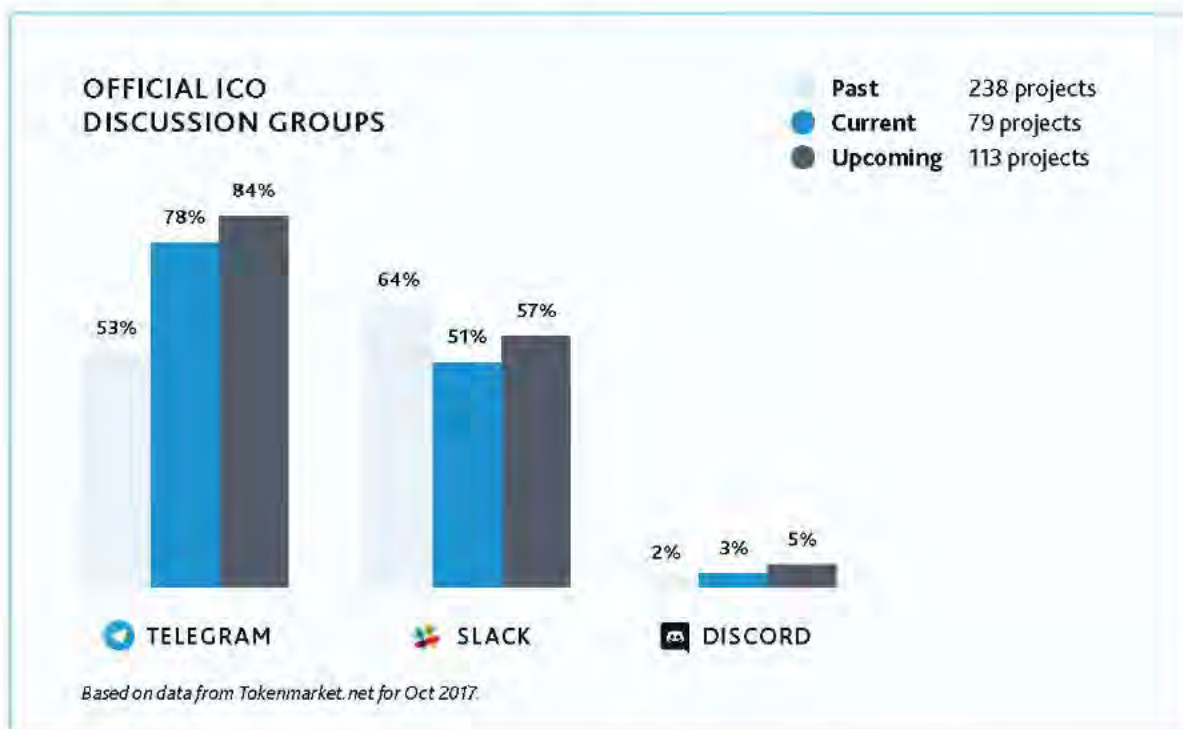
Integrated into Telegram applications, the TON-Telegram wallet will instantly become the world's most adopted cryptocurrency wallet.

The TON coins exchanged by Telegram users will be called «Grams» and denoted by the TON triangular symbol or the 💎 gem emoji. The Gram will serve as the principal currency for the in-app economy on Telegram, and, like any other cryptocurrency, will be available for external use.



External Secure IDs

According to Tokenmarket, 84 percent of blockchain-based projects have an active Telegram community, more than all other chat applications combined.⁷ Forbes and other media outlets have called Telegram the «cryptocurrency world's preferred messaging app» and «as ubiquitous to the cryptocurrency world as Snapchat is to a teenager».⁸



Because the majority of actors in the new digital economy already have active Telegram accounts, it is natural for Telegram to offer a secure universal ID. After passing KYC-AML on Telegram once, users will get a virtual passport to log into services that require user verification, thereby eliminating a major point of friction for anyone engaging with crypto-assets.

All private data (such as passport scans) will eventually be stored end-to-end encrypted with a key known only to the owners. Telegram's distributed servers (and later the TON Blockchain) will have no access to this information, but will instead store a hash of the value to be able to confirm that the data was verified when the user obtained their secure ID. Third parties will be able to add further verifications to these virtual passports.

7. Data from Tokenmarket, as of October 2017.

8. Russia Fines Cryptocurrency World's Preferred Messaging App, Telegram.



Ecosystem

Telegram's existing ecosystem will offer simple ways of buying the TON coins (Grams), and a range of services to spend them on, driving demand and fundamental value for the cryptocurrency.



Bot Platform

As of October 2017, more than 800 000 unique third-party bots are regularly used by 52 million Telegram users. These bots can already accept credit card payments from users in 200 countries via eight providers connected to the Telegram Payments Platform.⁹ In the future, by using their verified IDs in conjunction with bots that accept credit cards, Telegram users will be able to buy and **exchange cryptocurrencies** in a frictionless and legally compliant way.

Telegram will provide a unified entry point for users willing to connect with bots that offer exchange services, effectively creating a competitive market.



Groups and Channels

The Telegram ecosystem includes millions of public group chats reaching up to 30 000 members and broadcast channels, the largest of which have several million subscribers. Telegram's public broadcast channels generate over 30 billion views by 80 million users each month. Creators of large channels currently try to monetize them by posting advertisements or promoting other channels and groups. However, they presently lack the necessary tools to formalize their transactions with advertisers.

To fix this, Telegram will launch a TON-based **ad exchange** where parties interested in promoting their projects can connect with the relevant channel owners and negotiate a price in a transparent and fully automated way. All accompanying transactions will be made in Grams on a per-view or per-click basis, with the necessary statistics and guarantees provided to all parties.



Digital Content and Physical Goods

Bots, channels, and groups provide a ready market for paid content and subscription services. Users will be able to support publishers and content creators by making donations or paying for exclusive access. Bots can act as virtual storefronts and accept orders for the delivery of physical goods. Telegram's in-app economy will supply the TON market with a wide range of goods and services that can be obtained with TON coins.

9. Bot API Payments: <https://core.telegram.org/bots/payments>.





A Gateway to Decentralized Services

Telegram will offer a searchable registry of decentralized services from its applications, providing a list of the most popular apps, as well as recommendations based on the user's history of choices. These steps can make Telegram a gateway to blockchain-based projects for the masses — similar to how Google Play and the App Store currently work for centralized applications. ▼

Uses of TON as a Cryptocurrency

In addition to payments for all digital and physical assets sold by individual merchants within the Telegram ecosystem and on other projects integrated with TON, the TON coins (Grams) will be used as:

- › Commission («gas») paid to TON nodes («validators») for processing transactions and smart contracts;
- › Stakes deposited by validators to be eligible to validate transactions and generate new blocks and coins;
- › Capital lent out to validators in exchange for a share of their reward;
- › Voting power required to support or oppose changes in the parameters of the protocol;
- › Payment for services provided by apps built on the platform (TON Services);
- › Payment for storing data securely in a decentralized way (TON Storage);
- › Payment for registering blockchain-based domain names (TON DNS) and hosting TON-sites (TON WWW);
- › Payment for hiding identity and IP addresses (TON Proxy);
- › Payment for bypassing censorship imposed by local ISPs (TON Proxy).


All of these services can be free for the users since the application owners may choose to cover the corresponding fees, and adopt a freemium or an advertisement-based business model. ▼



Roadmap

The TON and Telegram technical roadmaps include the following milestones:



Telegram will also continue shipping monthly product updates that are not related to TON. 



Token Distribution

To obtain the resources required to make TON a reality, Telegram is launching a token sale in Q1 2018. The token sale will likely use a SAFT¹⁰ to be converted 1:1 to native TON tokens (Grams) after the deployment of the TON Blockchain in Q4 2018.



The total supply of native TON tokens (Grams)
will equal 5 billion.

After the TON Blockchain is fully deployed, the annual inflation rate derived from the fundamental parameters of TON is projected at two percent. This inflation represents a payment made by all members of the community to the validators for keeping the system functional.

See «Validators», 2.6.1, «Original supply, mining rewards and inflation», A.3.

Four percent of the supply (200 million Grams) will be reserved for the development team with a 4-year vesting period. During the initial stage of active TON development, at least 52 percent of the entire supply will be retained by the TON Reserve to protect the nascent cryptocurrency from speculative trading and to maintain flexibility at the early stages of the evolution of the system. The remaining 44 percent (2.2 billion Grams) can be sold in accordance with the formula below:

$$p_n := 0.1 \times (1 + 10^{-9})^n \text{ USD}$$

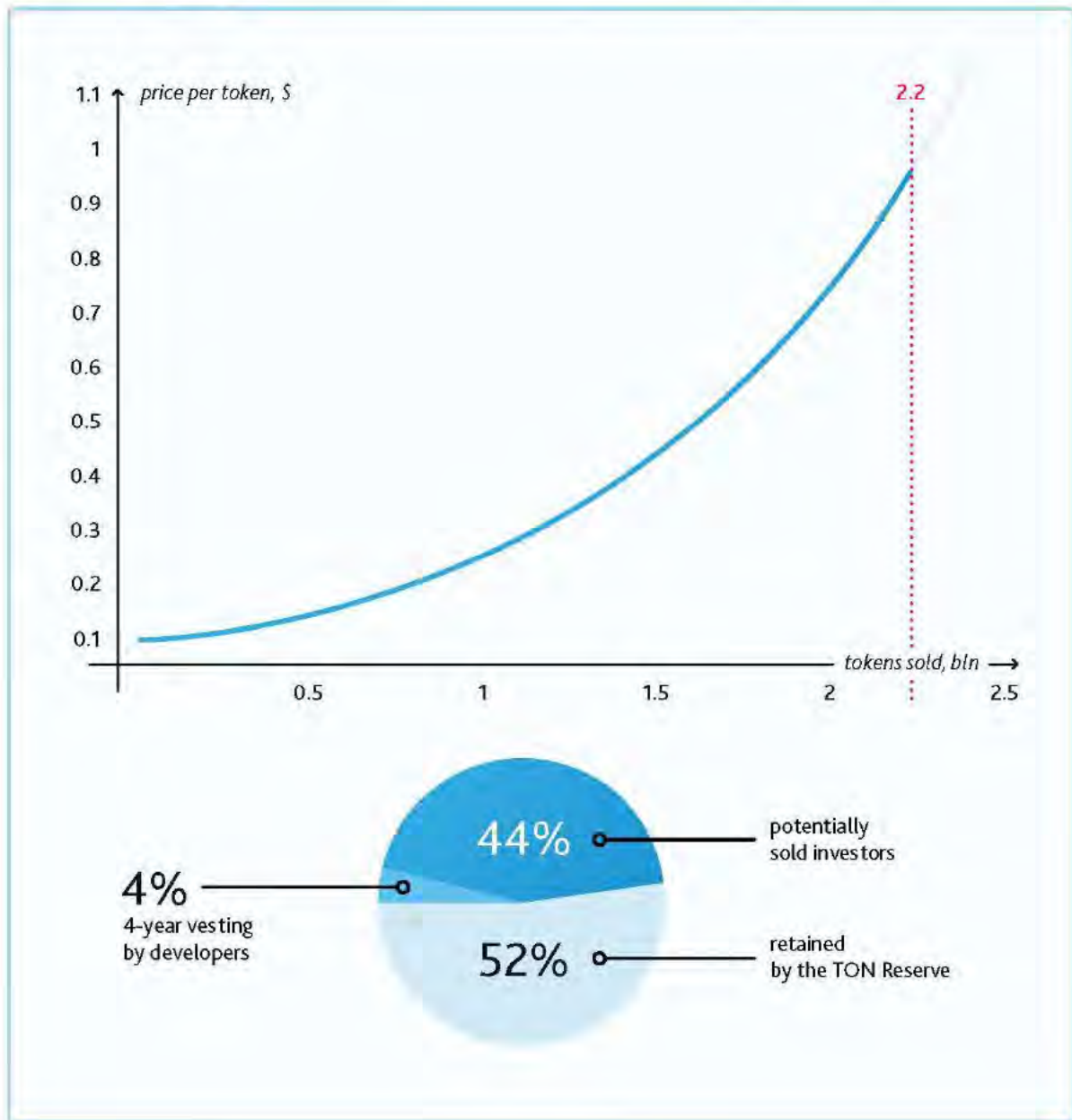
The price of the first token to be sold will be approximately 0.1 USD, with and each successive token will be priced one billionth higher than the previous one. As a result, the additional supply

¹⁰. See the SAFT Project.



coming from the TON Reserve will always be more expensive than the price paid by any of the existing buyers.¹¹ This structure should allow the market to define the fair price and volume for the token sale.

A bulk pre-sale of TON tokens to a group of institutional investors for a fiat currency is possible under the average price per token or higher, depending on the vesting period and the volume of the transaction. ▼



11. See section A.4 in the Technical White Paper, «Original price of Grams».



Use of Funds

Funds raised during the Telegram ICO will be used for the development of Telegram and TON and for the ongoing expenses required to support the growth of the ecosystem.


More than 80 percent of collected funds will be spent on equipment, bandwidth, colocation, and user verification costs. The rest will be allocated for wages, offices, and legal and consulting services.

80%



20%



The annual budget of Telegram in 2017 amounted to \$70 million, out of which \$62 million were spent on equipment, bandwidth, colocation, and user verification costs. Telegram's spending is projected at \$400 million in the next three years (approximately \$100 million in 2018, \$130 million in 2019, and \$170 million in 2020). A total spending of about \$620 million to support continuing organic user growth should allow Telegram to reach one billion active users by January 1, 2022. 



Governance

The founders of Telegram will be responsible for the efficient use of funds resulting from any sale of tokens from the TON Reserve. Over time, all responsibilities related to TON and its Reserve will be transferred to the TON Foundation, a not-for-profit organization.

By 2021 the initial TON vision and architecture will have been implemented and deployed. TON will then let go of the «Telegram» element in its name and become «The Open Network».

From then on, the continuous evolution of the TON Blockchain will be maintained by the TON Foundation.


Telegram will serve as a launch pad for TON, ensuring its technological superiority and widespread adoption on the initial stages, but the future of TON is in the hands of the global open-source community. ▼

Telegram Open Network → The Open Network



Team

Telegram has a world-class team of 15 developers that were selected from thousands of contenders over the last ten years. To become part of the team, each of its current members had either to win in the world's top programming contests or to take the first place in one of the nationwide multi-level coding competitions held by the founder of Telegram.

Core team members have ten years of experience in building scalable projects for tens of millions of users. Before building Telegram, they created  VK, the largest Europe-based social network with more than **100 million active users**, which still enjoys a dominating share in its local markets.

The Telegram backend team, which has an unparalleled ratio of **winners of worldwide coding competitions**, specializes in creating secure data storage engines for distributed server infrastructures. All networking, cryptographic, and database engine software running on thousands of Telegram servers is custom-built by these developers.

Founders



Dr. Nikolai Durov

Phd (Bonn University), Phd (Saint-Petersburg State University)

- › 2013-present: Co-founder, CTO, Architect, Lead C/C++ Engineer at Telegram. Built MTProto and Telegram's distributed data storage engines;
- › 2006-2013: Co-founder, CTO, Architect, Lead C/C++ Engineer at VK. Built data storage and networking software.

Awards

- › Absolute World Champion in Programming (2000, 2001) — one of ten people in history to win the ACM International Collegiate Programming Contest twice;
- › Gold Medals in International Mathematical Olympiads (1996, 1997, 1998);
- › Gold and Silver Medals in International Olympiads in Informatics (1995, 1996, 1997, 1998).

Nikolai is a renowned mathematician and a world-class programmer, uniquely combined in one person. At the age of 8 Nikolai already solved cubic equations.¹² He started coding

¹² Nikolai was invited to demonstrate this skill on the main TV channel of Italy, where the Durovs lived at the time.



at 9, and by 13 he built a full-fledged operating system for Intel 80386 microprocessors in x86 assembly language. While spending summers in Siberia without access to a computer, 11-year old Nikolay filled hundreds of pages with x86 assembly code, creating programs such as a Forth interpreter entirely on paper. As a CTO and guru in distributed systems, he scaled VK and then Telegram to tens of millions of daily users. In 2014 Nikolai became interested in Bitcoin and related technologies. His research on these topics culminated in TON's Technical White Paper, where he summarized the advancements of blockchain technology and proposed a novel architecture for scalable decentralized ledgers.



Pavel Durov

- › 2013-present: Co-founder, CEO, Product Manager at Telegram;
- › 2006-2013: Co-founder, CEO, Product Manager, Lead Developer at VK.

Awards

- › The most promising Northern European leader under 30 (2014);¹³
- › Young Global Leader by the World Economic Forum (2017).¹⁴

Pavel first gained international recognition for founding VK, which under his leadership commanded a 70 percent market share in Russia, Ukraine and Belorussia, eclipsing Facebook and other competing social networks. An outspoken libertarian, he published free market manifestos urging the Russian government to deregulate and decentralize the country's economy. Pavel was forced to sell VK and leave Russia in 2014 after a clash with the government over his users' privacy and freedom of speech.

Pavel started coding at 10, and at 11 he already created his first multiplayer strategy game. As a teenager, he built popular online communication tools for fellow students. At 21 he single-handedly coded the first version of VK. Pavel founded Telegram and became interested in cryptocurrencies in 2013, when he spent \$1.5 million of his savings on Bitcoin that he holds to this day.

13. [VKontakte's Founder Pavel Durov the Most Promising Northern European Leader Under the Age of 30.](#)

14. [Young Global Leader, Class of 2017.](#)



Other Notable Team Members



Aliaksei Levin

- › 2013-present: C/C++ Engineer at Telegram. Developed distributed data storage engines, client cross-platform libraries, and the bot API;
- › 2010-2013: C/C++ Engineer at VK. Built data storage engines and created the custom programming language KPHP for high-level backend developers.

Awards

- › Gold Medal, ACM International Programming Contest World Finals (2011);
- › Silver Medal, ACM International Programming Contest World Finals (2010);
- › First Prize, International Mathematics Competition for University Students (2009);
- › Gold Medal, First Place, International Mathematical Olympiad (2005);
- › Silver Medal, International Mathematical Olympiad (2004).



Vitalik Valtman

- › 2013-present: C/C++ Engineer at Telegram. Developed networking and data storage engines;
- › 2010-2013: C/C++ Engineer at VK. Developed networking and data storage engines.

Awards

- › Silver Medal, ACM International Programming Contest World Finals (2006);
- › 4th place, Top Coder Open;
- › 4th place, Top Coder Collegiate Contest.



Arseny Smirnov

- › 2013-present: C/C++ Engineer at Telegram. Developed server data storage engines, client cross-platform libraries, and bot API;
- › 2010-2013: C/C++ Engineer at VK. Developed data storage engines and created the custom programming language KPHP for high-level backend developers.

Awards

- › Gold Medal, ACM International Programming Contest World Finals (2011);
- › Silver Medal, ACM International Programming Contest World Finals (2010).





John

- › 2014-present: Client C++ Engineer at Telegram. Single-handedly built Telegram Desktop;
- › 2007-2013: Lead backend/frontend Engineer at VK after winning a nationwide contest in JS.



Igor

- › 2014-present: Lead Backend Engineer at Telegram. Built the entire Telegram API for client apps;
- › 2007-2013: Lead backend/frontend Engineer at VK after winning a nationwide contest in JS.



DrKlo

- › 2014-present: Android Engineer at Telegram after winning a nationwide contest in Android Java. Built Telegram for Android;
- › 2012-2013: iOS Engineer at VK after winning a nationwide contest in Objective C.



Peter

- › 2014-present: iOS/Swift Engineer at Telegram. Built Telegram for iOS (Objective C). Built Telegram Beta for iOS (Swift);
- › 2012-2013: iOS Engineer at VK after winning a nationwide contest in Objective C.



Grisha

- › 2016-present: Cross Platform Developer at Telegram. Builds voice calls;
- › 2010-2016: Android Engineer at VK after winning a nationwide contest in Java for Android. Single-handedly built the VK app for Android.



Kolar

- › 2014-present: Backend/Frontend Engineer at Telegram. Built the Instant View Platform, the Translations Platform, telegra.ph, telesco.pe, etc.;
- › 2010-2013: Lead backend/frontend Engineer at VK after winning a nationwide contest in JS.



Ilya

- › 2013-present: iOS/Swift Engineer at Telegram after several winning a nationwide contest in Objective C. Built multiple features for Telegram iOS.



Igor

- › 2013-present: Infrastructure Architect at Telegram. Scaled Telegram to tens of thousands of servers;
- › 2008-2013: Senior System Engineer. Scaled VK to tens of thousands of servers.



Exhibit C

From: John Hyman [REDACTED]
Sent: Wednesday, January 24, 2018 6:39:28 PM
To: [REDACTED]
Cc: John Hyman (hyman@telegram.org)
Bcc:
Subject: Re: Telegram Private Placement Update
[REDACTED]

On 24 Jan 2018, at 18:35, [REDACTED] > wrote:

Hi I am out. all good. For another year :). What's your number? Thx. [REDACTED]

Sent from my iPhone

On Jan 24, 2018, at 7:11 AM, John Hyman <hyman@telegram.org> wrote:

That's a good time for me
Good luck with [REDACTED] !!

On 24 Jan 2018, at 15:09, [REDACTED] > wrote:

Sure! May I give you a call after my [REDACTED]? Should end around 10:30am my time. Hopefully not too late in the UK. Thank you. [REDACTED].

Sent from my iPhone

On Jan 24, 2018, at 12:08 AM, John Hyman <hyman@telegram.org> wrote:

Thanks for the update
Can we have a quick chat today regarding the information please
let me know what's good for you

On 24 Jan 2018, at 07:30, [REDACTED] wrote:

Hi John,

We finished our technical diligence on the WP.
Everything looks good.

Our lawyer is working filling out the KYC, etc. I should
give you some feedback in the next 24 hours.

In the meantime, do you have detailed information on
the user statistics? User stats by geographies: New user
growth, attrition, active users, messages/users, etc. no
need to create new documents just for me. Please share
whatever you already have to help us have a better feel.

Thank you.

[REDACTED]

From: John Hyman [mailto:hyman@telegram.org]

Sent: Thursday, January 18, 2018 4:24 PM

To: [REDACTED]

Cc: ceo@telegram.org; Ilya Perekopsky

<perekopsky@telegram.org>; Shyam Parekh

<shyam@telegram.org>

Subject: Telegram Private Placement Update

Dear [REDACTED],

Thank you for the support you have shown to the Telegram Open Network and for committing to subscribe for Grams in the Pre-Sale.

In response to your interest, we are proposing an allocation of 10 million USD and look forward to completing this subscription with you. Attached you will find a document outlining the process from now until payment and also containing the purchase agreement, along with an updated copy of the primer, technical white paper, and risk factors.

Once again, we thank you for your support. Please feel free to reach out to us if you require any guidance during the remainder of the process.

Regards,
John

**Exhibits D-E Withheld Pending
Resolution of Investor B's Motion to Seal**

Exhibit F

From: [REDACTED]

Sent: Tuesday, July 16, 2019 7:18:23 AM

To: [REDACTED]

Cc: [REDACTED]; [REDACTED]

Bcc:

Subject: Re: Liquid - Telegram GRAM

Hi [REDACTED],

I got this info from their website. <https://www.liquid.com/gram/>

We are working with **Gram Asia** for the purposes of this sale. Gram Asia is the largest holder of Gram tokens from Asia, and a trusted partner of Liquid, with a long-standing relationship forged through strong business ties. Gram Asia supports the TON ecosystem by deploying its considerable capital and vast network of strategic partners to provide operations in the form of an Incubator, Node, Liquidity and Payment. To foster widespread integration with the TON ecosystem, Gram Asia works with licensed financial institutions to provide safe, secure and stable payment gateways for merchants in Asia.

For more information, please see: <https://gramasia.com/>

Best,

[REDACTED]
[REDACTED]

From: Mike Kayamori <mike.kayamori@liquid.com>

Sent: Tuesday, July 16, 2019 14:46

To: [REDACTED]

Cc: [REDACTED]

Subject: Re: Liquid / Telegram GRAM

Hi [REDACTED]

Is there anything in mind?

We do not allow any resale of Gram without the approval of the TON community.

If you are interested in selling some of your Gram tokens, I think it is best to wait until mainnet launch but if you have other things to discuss, we can do a call.

And yes, looking forward to meeting you in the near future.

kindest regards,

Mike k

On Tue, Jul 16, 2019 at 2:37 PM [REDACTED] > wrote:

Dear Mike,

Hope you are well! It has been over a year since we share a stage in Japan.

May I check on something with you?

We noticed Liquid successfully placed a block of GRAM tokens.

We are an investor in GRAM, and have an interest to trade some GRAM tokens.

Do you think we can learn more about how we can work together?

Thank you, and the next time you are in San Francisco or Shanghai, please let me and my partners ([REDACTED] copied) know.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

--

Mike Kayamori

Co-Founder CEO, Liquid Group Inc.

(+65) 9457-5411 / (+81) 70-4170-7274

Zoom : <https://zoom.us/j/2511399455>

Singapore : 80RR, 80 Robinson Road 9F Singapore 068898

Japan : 〒104-0031 東京都中央区京橋二丁目2番1号 19F <https://www.edogrand.tokyo/access>

Vietnam: 22F, Saigon Center 2 Tower, No. 67 Lê Lợi street, District 1, HCMC, Vietnam

mike.kayamori@liquid.com

www.liquid.com



Exhibit G

From: John Hyman (john@gramvault.com)

Sent: Thursday, July 18, 2019 8:56:58 AM

To: [REDACTED]

Cc: [REDACTED]

Bcc:

Subject: Re: Good catching up.

Attachments: Press Release TON Labs.pdf; ATT00001.htm

Hi [REDACTED]

Hope all is good .Theres lots of exciting developments with TON.

I attach a press release from TON labs who are rolling out the tools as planned,and they have met a very enthusiastic reaction from developers.

Can we do a catch up call next week to update you on progress on TON and TON labs.

We can talk about the wallet development and how to run a super node and give you an update on our recent dialogue with Pavel and the Telegram team.

Please let me know when could work

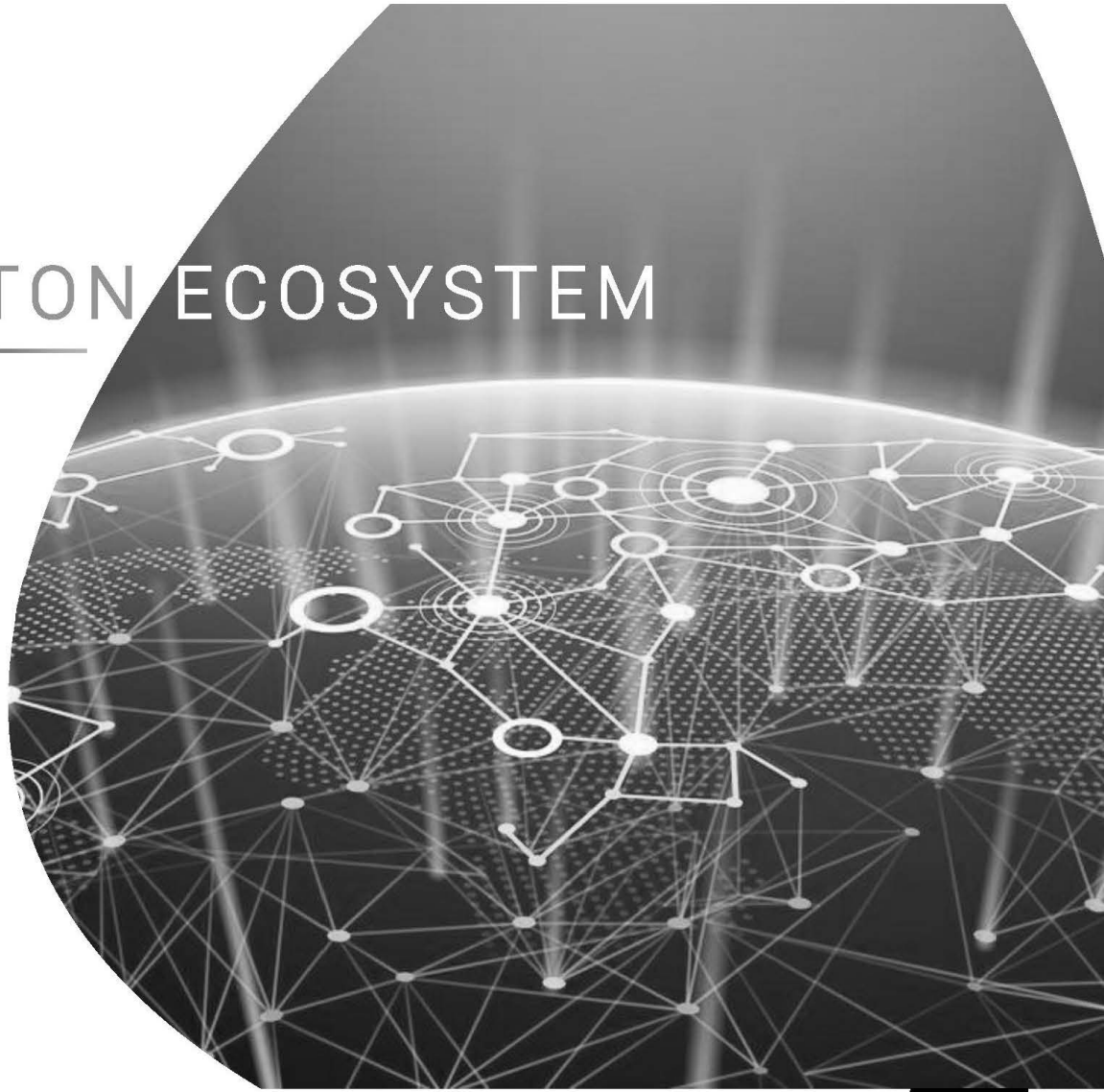
John.

Exhibit H

From: John Hyman (john@gramvault.com)
Sent: Wednesday, June 12, 2019 12:47:45 PM
To: [REDACTED]
Cc: fav@ton.ventures (fav@ton.ventures)
Bcc:
Subject: TON Ecosystem development 2019 06 05 v2 2.pdf
Attachments: TON Ecosystem development 2019 06 05 v2 2.pdf-
ATT00001.txt

[REDACTED]
Thanks for your time and patience with WiFi.
Here's the deck -please pass on to your colleagues.
We would love to have you as an investor here so let's keep talking
John

TON ECOSYSTEM



Strictly confidential

Some of the blockchain ecosystem challenges

Problems

Needed Solutions

01

Lack of infrastructure

Development is challenged by programming language incompatibility, inconsistent infrastructures, lack of advanced tools and communication

01

Simple and powerful tools

Simple and powerful tools for smart-contract and DApp development workflows

02

Absence of true decentralization

Existing DApps are websites or apps using 2.0 paradigm. Decentralization has never been achieved

02

Max decentralization

Max decentralization: each DApp in the ecosystem is a separate self-sufficient unit that can be used on its own or as a building block within a unique use-case.

03

No existing audience

The audience does not exist, each DApp has to find the way to the audience on its own now. Evidently, it fails

03

Clear user onboarding

Clear go-to-market and user onboarding from TON.Dev to DAppStore

04

Disconnected

Blockchain now is a disconnected walled garden

04

Competitiveness

The ecosystem to deliver DApps compatible with non-blockchain services, traditional banking, IoT, etc.

05

Poor UI/UX

Inconvenient account management

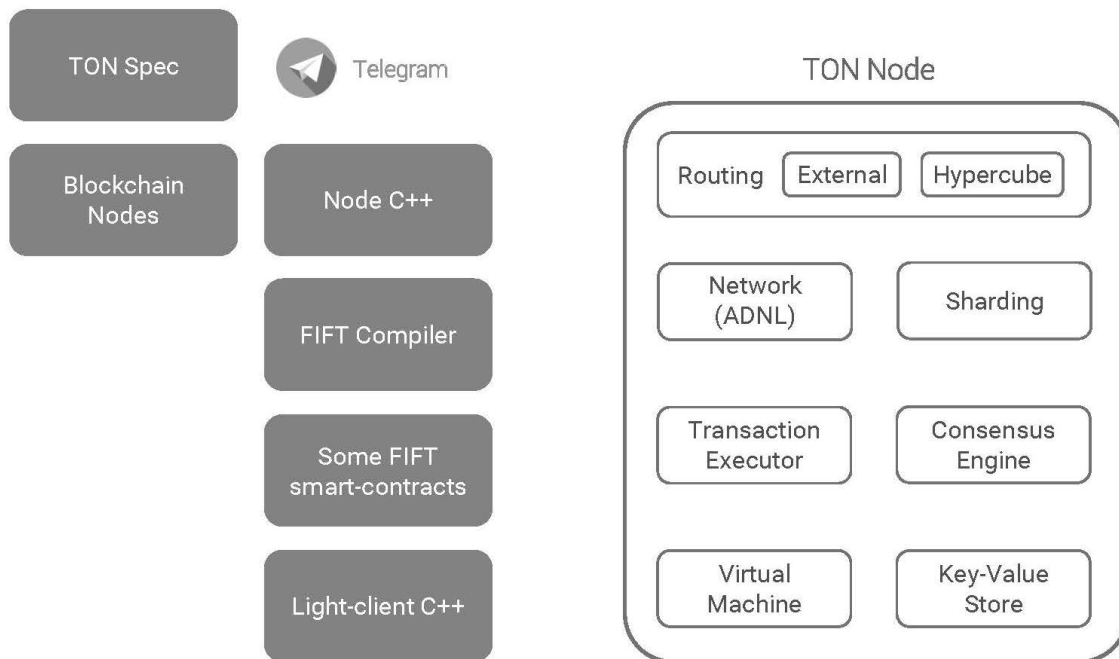
05

User friendly

Hassle-free operations with private keys

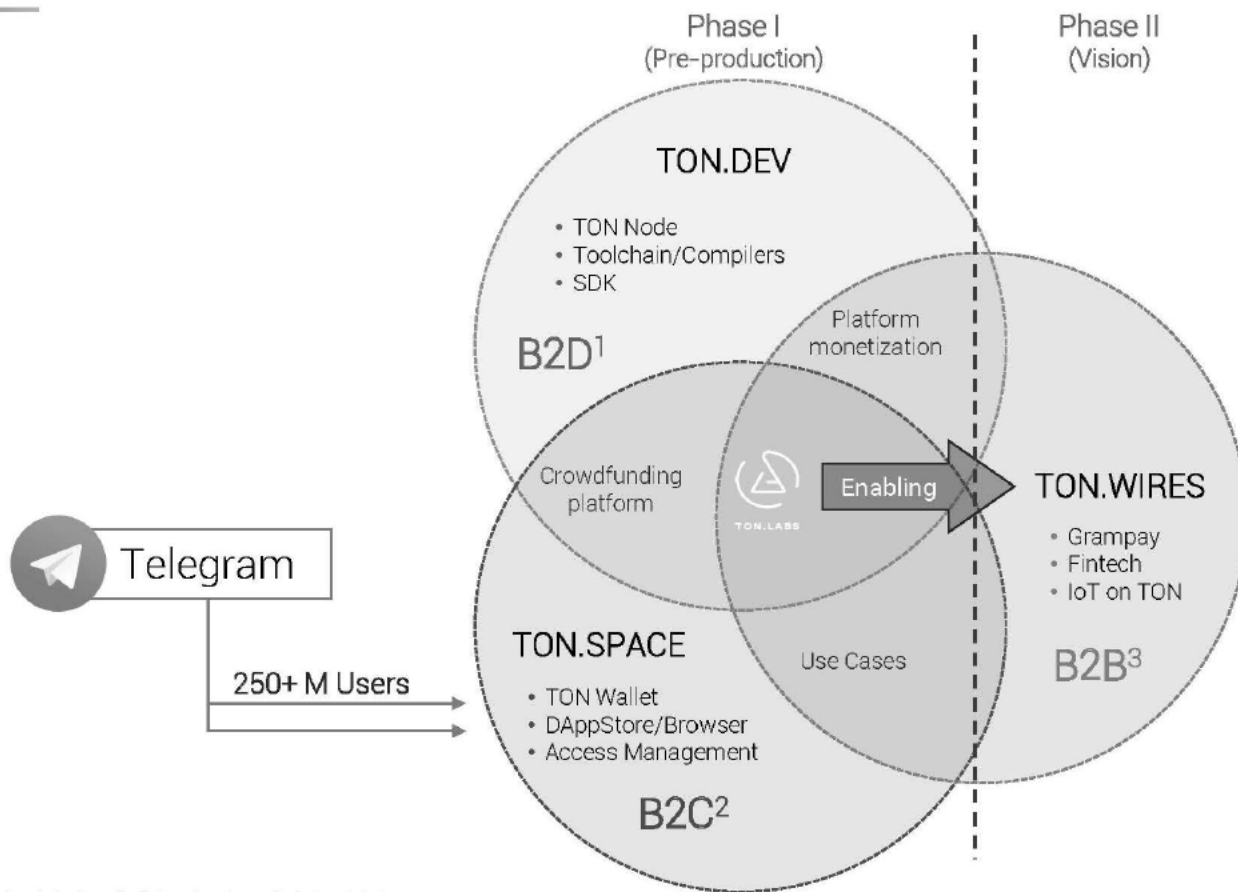
Strictly confidential

TON from Telegram – solving scalability and mass adoption



Strictly confidential

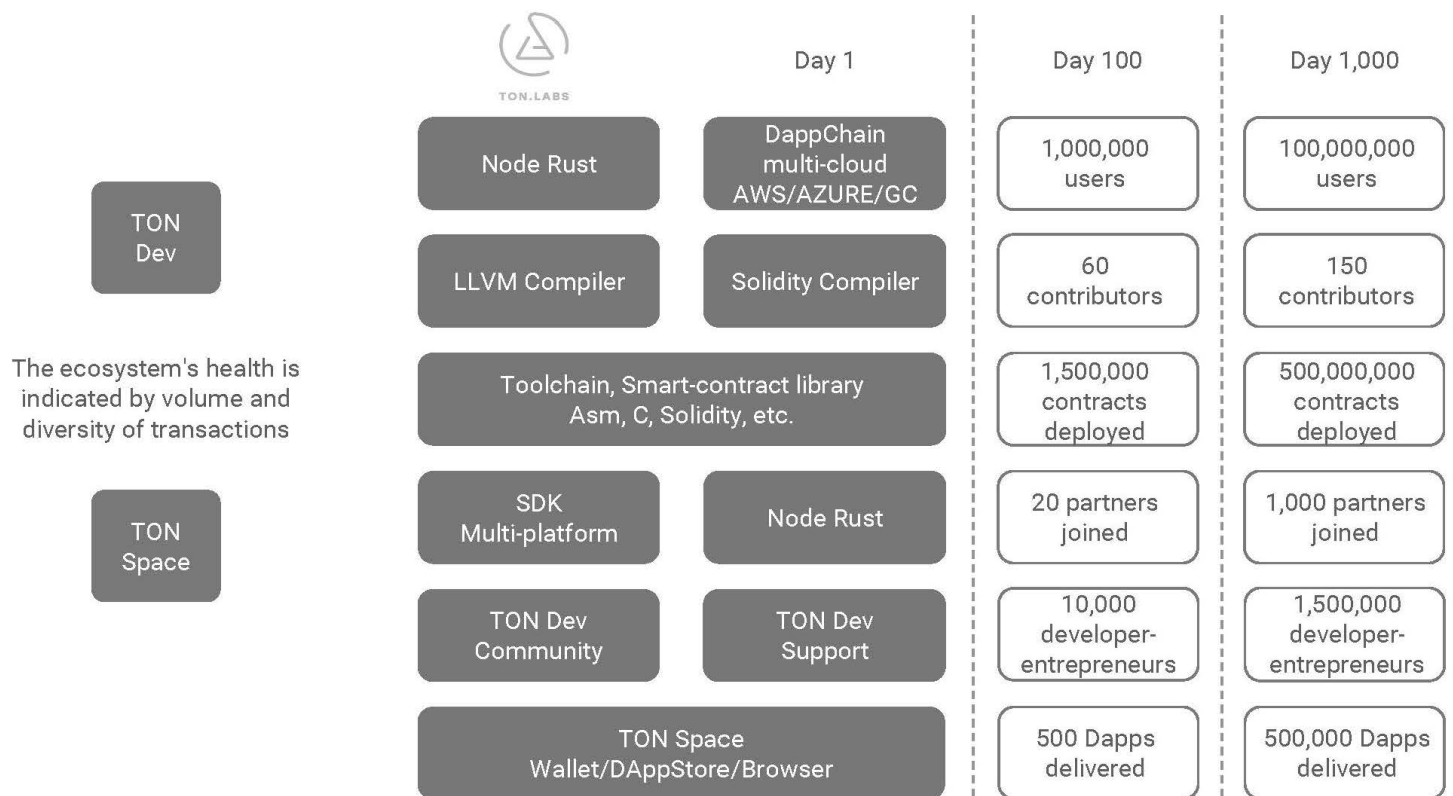
TON Labs – Contributing to the TON Ecosystem



¹ Business to developers; ² Business to customers; ³ Business to business

Strictly confidential

Key metrics



Strictly confidential

Wires enabled use case examples

Day 1

Plugged Services

- Cold wallets integration
- Telegram API integration
- Payment crypto and fiat (online)
- Exchanges crypto and fiat (online)
- KYC& AML services
- Advertising in Telegram

Enabled business models

- Wallets and exchanges
- Loyalty programs
- Virtual Cards

Day 100

Plugged Services

- Grampay (offline)
- Crowdfunding (Launchpad)
- Corporate management (legally binding)
- Billing system
- Document management
- LPWAN IoT network connection
- Oracles: government and public data
- ZKP etc.

Enabled business models

- E-commerce for services and nonphysical goods
- Fintech
- Alarm and theft protection

Day 1000

Plugged Services

- Accounting System
- Scoring providers
- Last mile logistics
- ABSERP / WMS
- CRM
- CMS

Enabled business models

- End-to-end logistics
- Physical goods marketplaces
- Full-fledged business operations support
- E-Government

Strictly confidential

Elements of the vision to manage sustainable growth

- 
- 01 Sustainable open source mentality and business model
 - 02 Distributed "Cloud" development team
 - 03 Direct partner – like relations with developer entrepreneurs
 - 04 Intelligent sequencings and balancing of Open Source and monetization
 - 05 Gradual development of global business development capabilities

Exhibit I

Introducing TON Labs



September 2019

strictly confidential

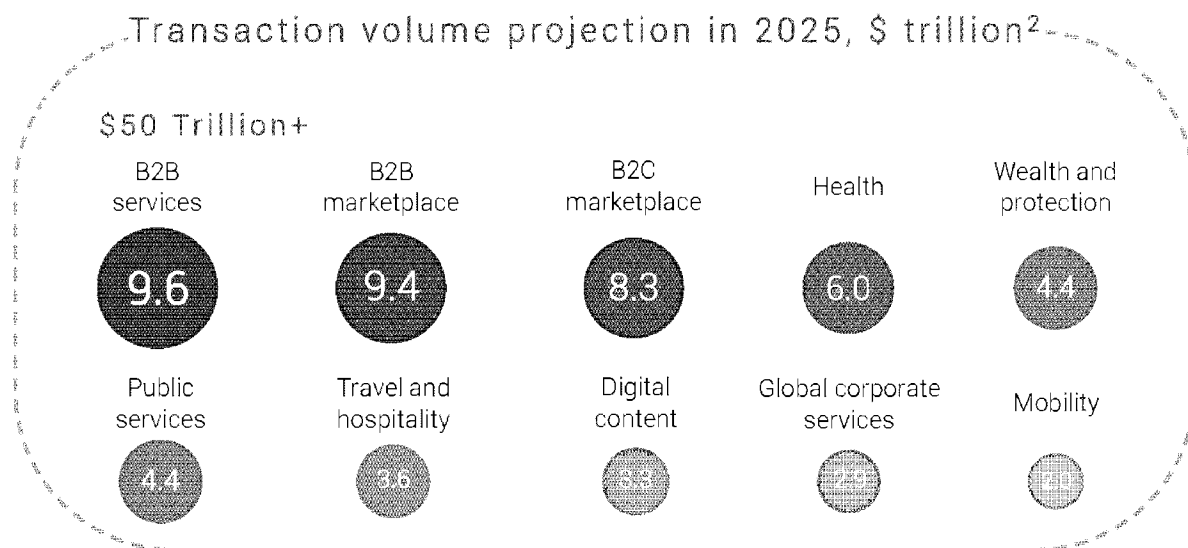
2955



TON LABS

DLT¹ economy has explosive growth potential

- Currently only one DLT/blockchain use case got wide adoption – p2p cryptocurrency transfers, but even this case is limited to less than 0,1% of its real potential.
- Some experts expect that DLT economy turnover may reach **50+ trillion US Dollars** in transaction volume by 2025².
- There is **a wall** between the technology and actual usage which consists from development barrier, bad UI/UX, low speed and high transaction costs for existing blockchains.
- DApps³ also never had direct access to large pool of users.



¹ – Distributed Ledger Technology

² – Source: McKinsey “Competing in a world of sectors without borders”

³ – Decentralized Applications

Strictly confidential

2956

Upcoming TON ecosystem will break the blockchain adoption wall



- Complimentary solutions of Telegram, TON and TON Labs enable clear path for adding value to existing online business models by implementation of DLT solutions.
- Existing Telegram userbase should fuel initial growth of TON ecosystem.
- TON Labs solutions will facilitate stable TON ecosystem growth to become the largest DLT ecosystem in the world.

Telegram



280+ million users
10x times more than
current number of "crypto
users"
Growing very fast

TON



Fast and scalable "backend"
– TON blockchain
GRAM cryptocurrency

TON Labs



Easy access of users to
TON ecosystem
Easy TApps¹ creation by
developers
Easy usage of TApps by
users

1 – TON Application



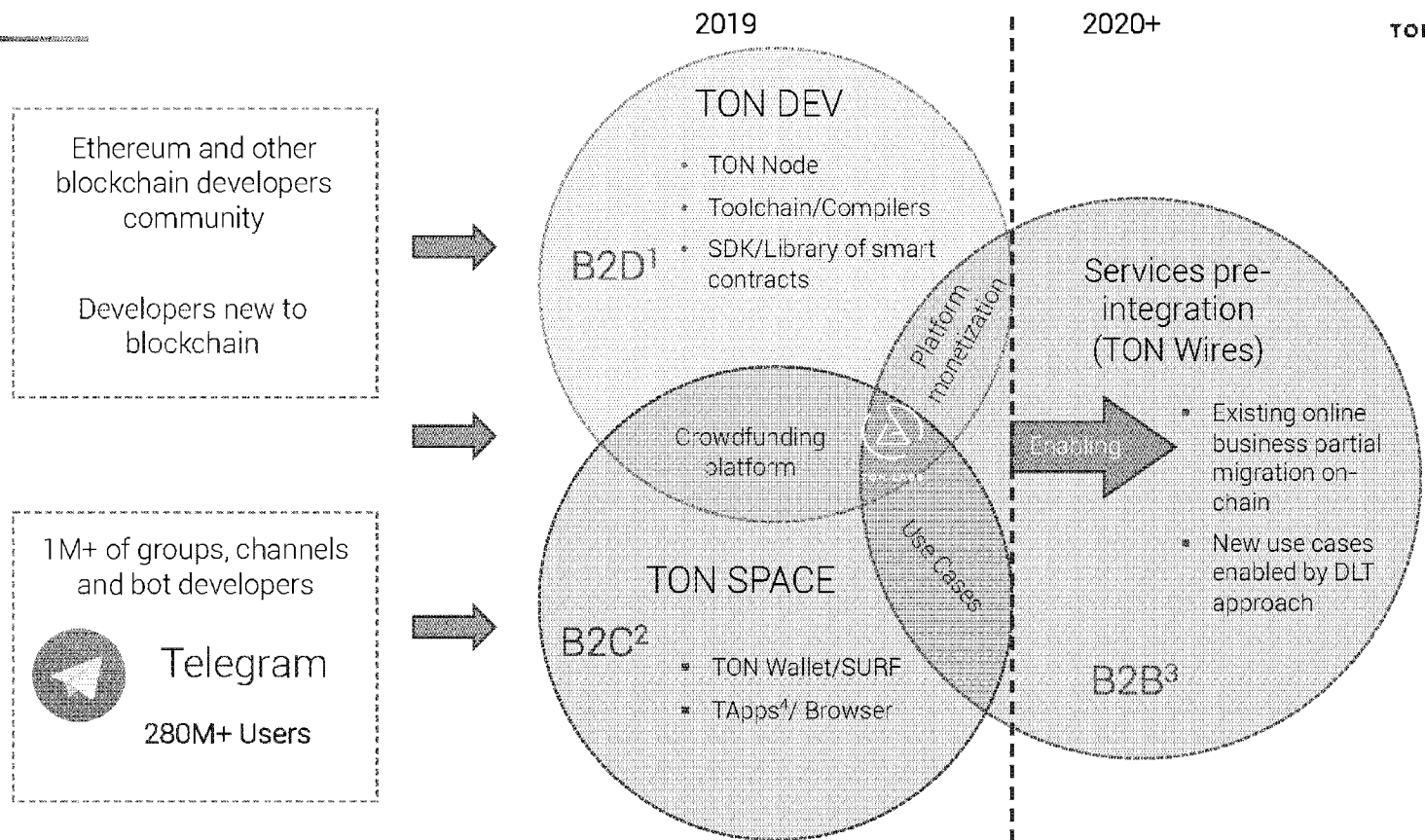
TON Labs highlights

- Founded in April 2018, after the closing of the second Token Sale Round of TON with the mission to contribute to maximizing TON ecosystem potential.
- Founders personally invested significant amount into TON.
- Founding team with vast venture and entrepreneur experience, including expertise of scaling large organizations.
- Team of more than 45 experienced developers geographically decentralized:
 - Organized and well managed development process using proven team collaboration frameworks;
 - Modern technology stack (React Native, Rust, etc.);
 - 5 finalists of world programming contests and many other programming awards;
 - Active contributor to various open source projects.
- The largest contributor to TON blockchain testing.
- Developed the only other implementation of TON Full Node based on initial public specifications.
- Playing one of the leading roles within TON oriented blockchain community including very close technical collaboration with TON team.

Strictly confidential

2958

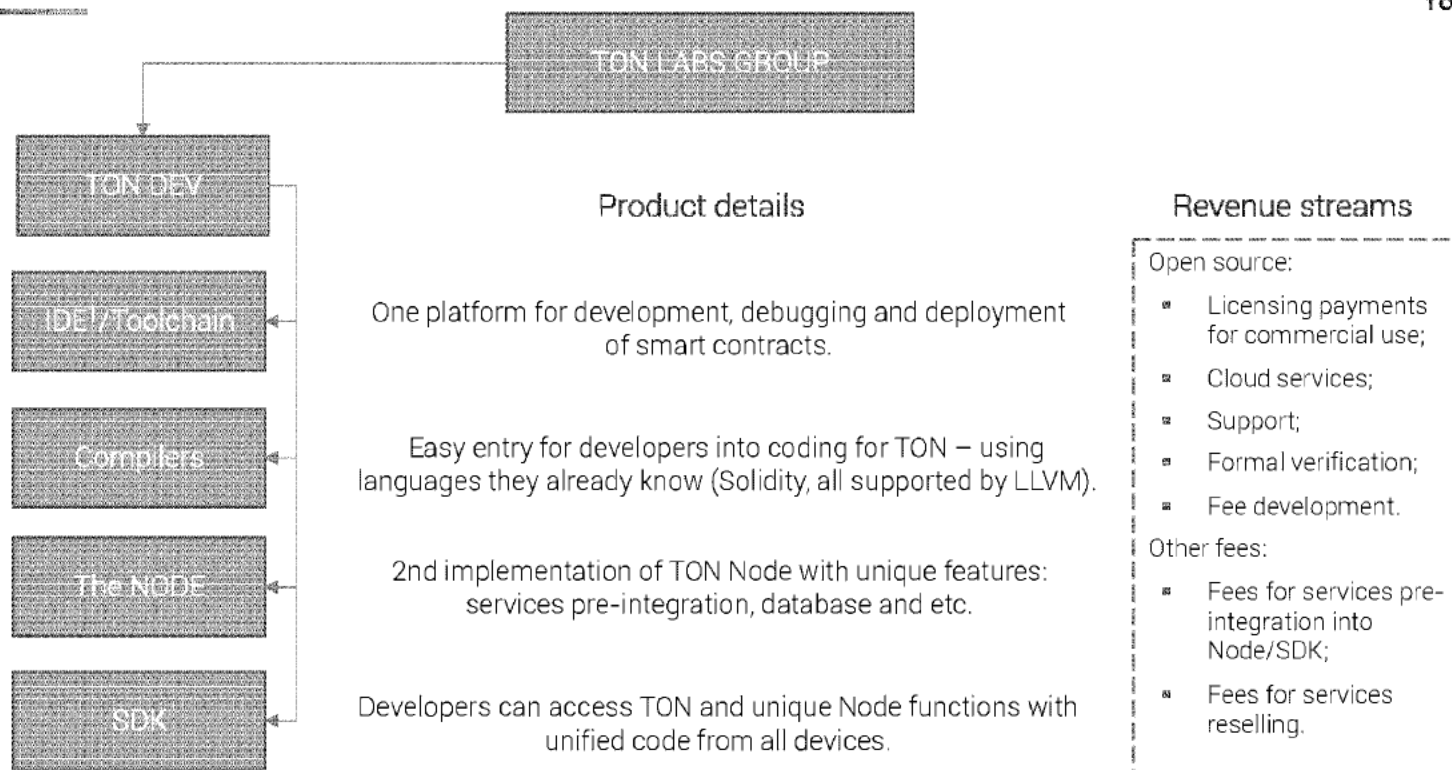
TON Labs enables mass adoption of DLT



1 – Business to developers; 2 – Business to customers; 3 – Business to business ; 4 – TON application



TON Labs: TON DEV and developers' platform



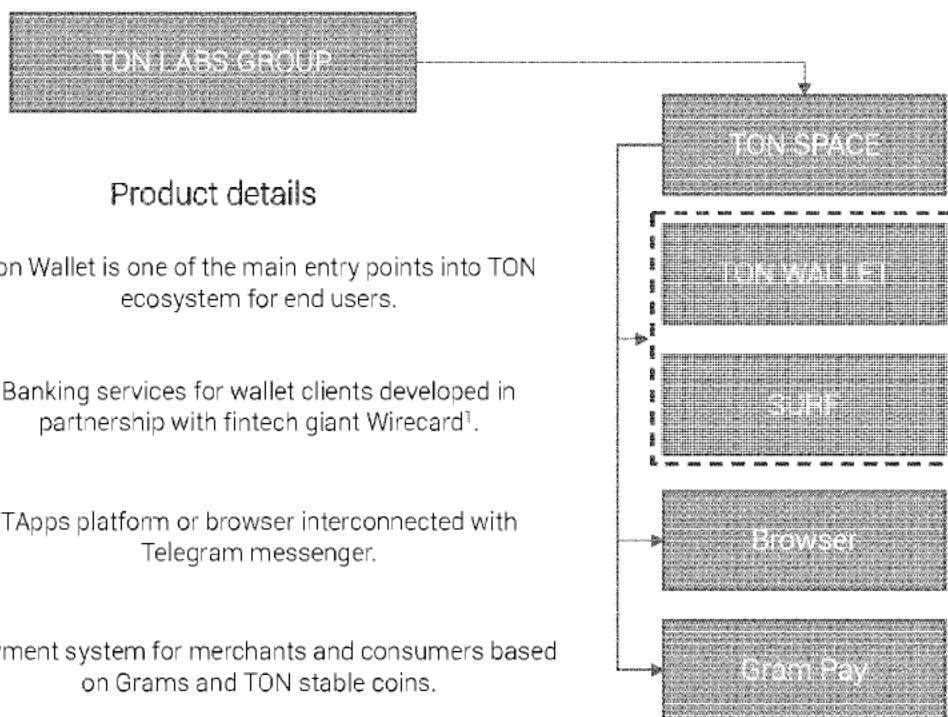
TON DEV is a main entry point into TON Ecosystem for developer-entrepreneurs

1 – Integrated Development Environment

Strictly confidential

2960

TON Labs: TON.SPACE and consumer platforms



Revenue streams

- TON Wallet Fees:
 - Acquiring;
 - Exchange;
 - Transfers;
 - Staking.
- Up sales: deposits, loans, investments, etc.
- Gram Pay:
 - Transaction fees;
 - Exchange fees.

Product details

Ton Wallet is one of the main entry points into TON ecosystem for end users.

Banking services for wallet clients developed in partnership with fintech giant Wirecard¹.

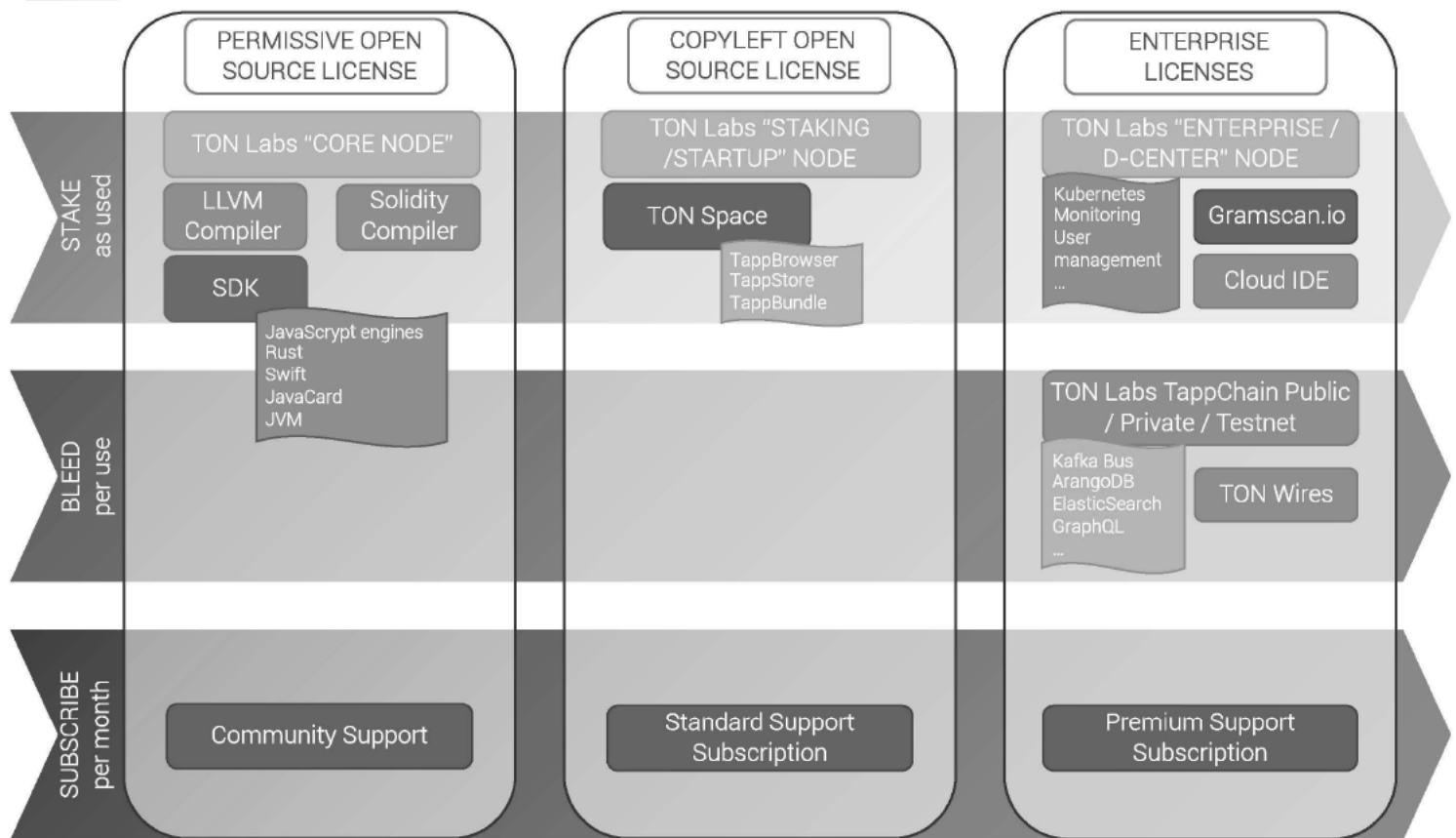
TApps platform or browser interconnected with Telegram messenger.

Payment system for merchants and consumers based on Grams and TON stable coins.

TON SPACE will benefit from being one of the main links between Telegram and TON ecosystem

¹ - <https://www.wirecard.com/de>

TON Labs offers comprehensive licensing model



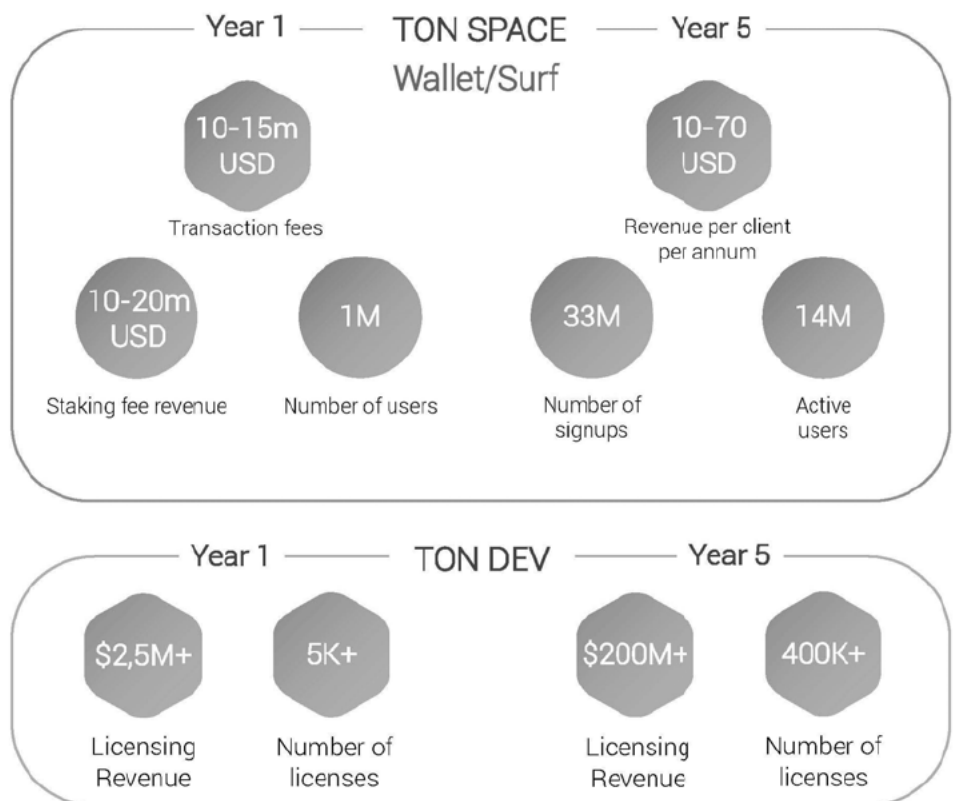


Key metrics: exceptional growth potential

Current

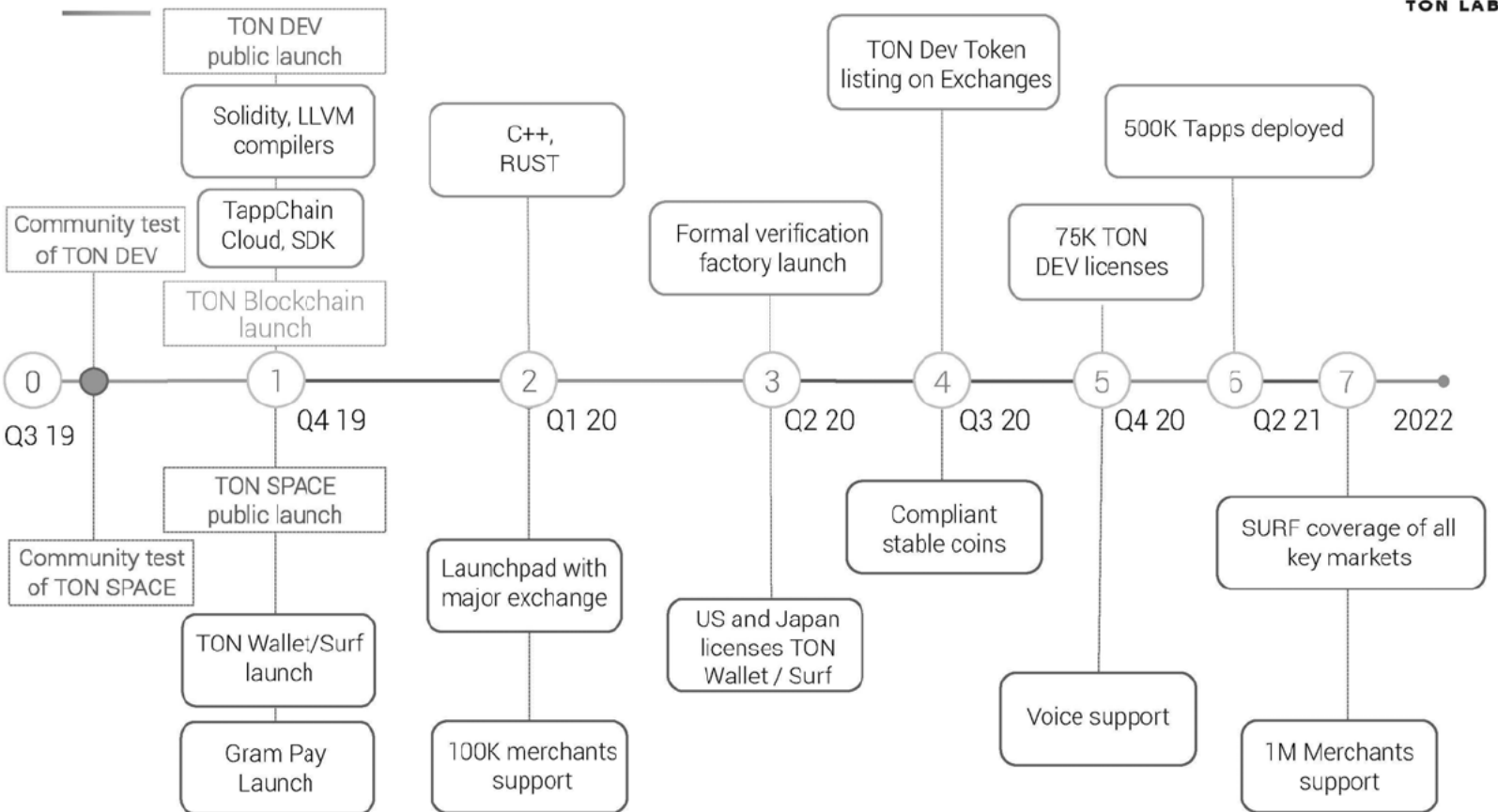
- Company has spent ca. 2m USD on product development;
- More than 40 developers;
- Current burn rate is ca. 200K USD per month ~ mostly on payroll;
- Average projected monthly burn rate for the next 10 months is ca. 350K USD;
- TON DEV and TON SPACE are already in beta testing;
- Marketing activities within community have already started.

Projections





TON Labs: Road map



Strictly confidential

2964

TON Labs team consists of 45+ professionals
geographically decentralized around Europe



Alexander Filatov
Founder & CEO

- 25+ years of management and investment experience
- Former CEO of 75K+ and 25K+ employees' companies
- Established his first tech company in 1999



Pavel Prigolovko
Co-Founder & CSO

- Investor and entrepreneur for the last 10 years
- Co-Founder of Pay Ring
- Began his career in FMCG (Mars, BAT, Inbev)



Dmitry Malyugin
Co-Founder & COO

- 10+ years of strategy and operations and VC&PE experience
- Began his career as strategy consultant (E&Y, KPMG, Roland Berger)



Dmitry Goroshevsky
Co-Founder & CTO

- Developed a wide range of innovative solutions in telecom and distributed computing
- Co-author of patents in serverless p2p technology



John Hyman
Business Development

- Has 30+ years of high level experience in IB, Asset Management (Morgan Stanley, Renaissance Capital)
- Former Head of International Business in Telegram



Vyacheslav Belenko
VP Engineering

- 20+ years in s/w development experience: embedded s/w, client served solutions
- Former Chief s/w architect in LG Electronics (CIS)



Anton Serkov
Chief Client Software

- Solid programming experience for mobile, web and desktop platforms
- Winner of ACM programming contests



Andrey Kurochkin
Lead Network Architect

- Full stack developer for 10+ years
- S/w engineer in LG Electronics and Quora infrastructure team

Strictly confidential

2965

TON Labs is evaluating financing options that could include a bridge financing from Tier 1 venture investors



Terms:

- Up to 5 million USD bridge in form of CLA:
 - Cap \$50m;
 - Discount 20% to Round A.
- Round A – Q1'20-Q2'20, after launch of TON and ecosystem explosion.

Use of funds:

- Development and testing of current products (team boost – core team up to 60 developers, operations);
- Launch of the Wallet/Surf products in new markets (USA, Japan and Hon Kong licensing);
- Customer and developer experience (UI/UX);
- Targeted marketing of TON SPACE and TON DEV products to boost developer and customer acquisition.



Contact info
j.hyman@tonlabs.io

Let's Go